

RESEARCH ARTICLE



Demystifying the Relationship Between Students' L2 Grit and L2 Hope

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Abstract

Given the affective turn in the second-language (L2) research and the vital roles of L2 grit and L2 hope in learners' academic achievement, this quantitative study aimed to explore Chinese senior high students' L2 grit and L2 hope and examine whether there were possible correlations among the two variables and their components. 335 Chinese senior high students completed the questionnaire. Participants reported moderate levels of global L2 grit and L2 hope, but high levels of consistency of interest (COI). Additionally, no statistically significant gender difference could be observed among variables under investigation, while a statistically significant grade-level difference emerged in global L2 grit and global L2 hope, particularly in perseverance of effort (POE) and pathway. Furthermore, global L2 grit positively correlated with global L2 hope with a small-to-medium effect size. Among components of global L2 grit, POE exhibited the strongest association with L2 hope and its components. These findings extend the positive psychology framework in L2 research by highlighting the close link between L2 grit and L2 hope. Practically, the results suggest that English-as-a-foreign-language (EFL) instructors, particularly within the high-intensity examination-oriented educational settings, should spotlight EFL learners' positive psychological traits in daily teaching practices to promote learners' well-being during their learning journey.

Keywords: positive psychology; L2 grit; L2 hope; demographic differences; Chinese EFL learners; second language learning

INTRODUCTION

With the integration of positive psychology into second-language (L2) research, there has been an exponential growth in studies focusing on L2 learners' positive emotions and psychological traits, such as foreign language enjoyment (FLE) and buoyancy (Chu et al., 2024; Liu et al., 2024; Liu et al., 2025). However, grit and hope have been largely overlooked in this wave (Derakhshan & Fathi, 2024; Jiang & Liu, 2024; Liu et al., 2023). L2 grit is defined as a trait that exhibits an individual's "passion and perseverance for second-language learning" (Teimouri et al., 2022, p. 893). and hope is characterized as "a positive motivational state that is based on an interactively derived sense of successful agency (goal-directed determination) and pathways (planning to meet goals)" (Snyder et al., 1991, p. 287). With reference to these definitions, it is presumed that L2 grit and L2 hope share some overlaps with positive

psychology. However, scant scholarly attention has been devoted to exploring the relationship between L2 grit and L2 hope (Sun & Wang, 2024). Additionally, senior high school students are underrepresented within the limited body of research focusing on L2 grit and L2 hope (Derakhshan & Fathi, 2024). Targeting Chinese secondary EFL learners is necessary in that they face a high-intensity competitive learning atmosphere, which may lead to a loss of persistence and hope (Yu et al., 2022). Therefore, there is a need to scrutinize the relationship between L2 grit and L2 hope among secondary learners in the Chinese EFL context.

Theoretical Framework: Theoretical Link Between L2 Grit And L2 Hope

This study is anchored in an integrated theoretical framework synthesizing Snyder's Hope Theory (Snyder et al., 2002) and Duckworth's Grit Theory (Duckworth et al., 2007), with domain-specific adaptations for L2 learning contexts (Teimouri et al., 2022). To illustrate, Snyder's Hope Theory posits that hopeful thinking comprises agency (goal-directed determination) and pathway (strategic planning), forming a dynamic motivational system for overcoming obstacles (Snyder et al., 1991; Snyder et al., 2002). In L2 contexts, this translates to learners' ability to sustain goal commitment (agency) and devise language-learning strategies (pathway) when facing language learning

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challenges. Duckworth's Grit Theory conceptualizes grit as two interrelated dimensions, including perseverance of effort (POE)–sustained diligence toward long-term goals– and consistency of interest (COI)–stable passion across temporal spans (Duckworth et al., 2007). The L2-specific adaptation by Teimouri et al. (2022) recontextualizes these dimensions for language learning, emphasizing domain-specific endurance and interest maintenance.

Succinctly stated, our framework posits that POE (grit) synergizes with pathway (hope) to enhance strategic persistence, whereas COI (grit) aligns with agency (hope) to stabilize goal attainment and commitment via cognitive components such as interest and determination. To illustrate, COI and agency are related to an individual's awareness or perception, such as learners' interest in English and determination to master it. POE and pathway stress behavioral execution, that is, whether they put their awareness or perception into practice via reasonable plans when they meet challenges in English learning. This dual-lens approach extends positive psychology by mapping how temporal persistence (grit) interacts with cognitive-behavioral strategies (hope) to shape L2 achievement.

LITERATURE REVIEW

Studies of L2 Hope

Numerous studies have explored gender and age differences, concluding that there were differences in levels of hope between males and females, and males tended to report higher levels of hope than females (Ganji et al., 2021; Ghahremani et al., 2020; Zeng et al., 2022). Interestingly, concerning age differences, Ghahremani et al. (2020) found statistically significant differences in hope-related variables among different age cohorts, which was not congruent with findings revealed by Ganji et al. (2021). One possible reason for the inconsistency is that they chose different research instruments to measure participants' hope. Therefore, it is necessary to figure out the internal structure of the construct. According to Snyder et al. (1991), hope is composed of agency and pathway. With more and more researchers calling for domain-specific research on hope, participants' cultural backgrounds and specific characteristics are considered. Taking into consideration the Filipino cultural context, Bernardo (2010) developed The Locus-of-Hope Scale. To illustrate, given that Snyder et al. (1991) only emphasized individual pursuit, which was not consistent with Filipino students' understandings of agency, he expanded the scope of agency from internal agency to internal and external agency. Therefore, the four-dimensional structure was proposed, still with agency (internal and external-peers) and pathway (external-family and external-spiritual) as primary components, and it was validated in the same context (Bernardo et al., 2022).

In addition to the structure, researchers have explored the relationship between hope and some key educational variables. Bryce et al. (2022) found that the student-teacher relationship was positively associated with higher levels of hope. With high-quality student-teacher friendship, students tended to report higher levels of hope, and the whole class demonstrated greater collective efficacy. Regarding efficacy, Lei and Lei (2022) found that hope was positively related to creative self-efficacy. Additionally, hope is a pivotal trait for learners' academic achievement. Many researchers pointed out that hope was conducive to learners' academic achievement (Snyder et al., 2002), and

some scholars emphasized the path from academic achievement to hope. Phan (2013) reported that ongoing successes achieved by learners would facilitate their maintenance and strengthen their hope. Another topic closely related to learners' hope is academic procrastination. Dami et al. (2020) showed a statistically positive correlation between hope and academic procrastination, and the phenomenon was increasingly salient when learners began to complete tasks with less agency.

As for the predictability of hope, some research demonstrated that hope could predict learners' engagement (Chen et al., 2020). Furthermore, academic achievement is another topic attracting scholarly attention. Rand et al. (2020) found that hope directly predicted their grade expectancy and indirectly predicted their final-exam scores, which was consistent with findings uncovered by Chen et al. (2020), that is, sometimes hope might have a lagged effect on learners' later academic achievement. However, the predictability of hope as a united construct does not mean its two components, agency and pathway, are considered as strong predictors. After controlling socio-biographical factors (e.g., age and gender), Li et al. (2022) found that only agency could be identified as a strong predictor of negative affective conditions. Dixon and Scallucci (2021) argued that, compared with agency, pathway was a better predictor of executive functioning.

Studies of L2 Grit

The number of grit-related research has dramatically increased since Duckworth et al. (2007) proposed the concept of grit. Research on its internal structure has garnered considerable scholarly attention. Scholars have identified two widely examined scales for measuring domain-general grit, framing it as a bi-factor construct composed of POE and COI (Duckworth et al., 2007; Duckworth & Quinn, 2009). Its validity has been examined and confirmed in Western and Eastern cultures, exhibiting cross-cultural reliability (Gyamfi & Lai, 2020; Wei et al., 2019). In response to the calling for more research on domain-specific grit (Teimouri et al., 2021), some L2 researchers realized that domain-general grit may not align with domain-specific grit and conflating the two risks misinterpretations, potentially leading to Simpson's Paradox in data interpretation. Against the backdrop, Teimouri et al. (2022) developed L2 Grit Scale, but they still retained POE and COI as core factors.

Furthermore, the debate over the predictive effects of POE and COI, and whether COI can be considered a predictor for Asian L2 learners, remains unresolved. Some researchers argued that POE and COI differed significantly in predictive power, with POE, especially in Asia, appearing to be a stronger predictor than COI (Datu et al., 2016). However, there are conflicting findings. For instance, Kramer et al. (2017) argued that COI at least had the same predictability as POE. However, they did not explain the reasons for inconsistent findings observed in previous studies. Therefore, future studies should pay more attention to the predictability of POE and COI to confirm whether COI can be judged as a predictor for Asian L2 learners.

In addition to discussing the predictive effects of POE and COI, some researchers argued whether global grit and its two components were predictors of academic-related variables such as academic emotion, engagement, and outcomes. Resnik et al. (2021) demonstrated that global grit could predict foreign language classroom anxiety and FLE, two academic emotions commonly experienced by L2 learners. In addition to academic emotions, some research

has identified that grit is a predictor of engagement. Zhang et al. (2022) reported that EFL students' grit could predict academic engagement more powerfully than other variables. Tang et al. (2023) conducted their research among Chinese first-year undergraduate students and found that certain factors predicted their engagement via POE, whose findings were partly consistent with the findings of Sudina et al. (2021). Academic outcomes, another academic-related factor, are usually measured through learners' academic achievement, performance, or grade point average (GPA). Park et al. (2018) reported grit could predict most learners' academic outcomes. He et al. (2021) found that grit predicted achievement gains among average-IQ students, while the predictive effect became weaker or negligible among low-IQ students. Some researchers discussed the differences in predictability between the two components of grit and reported that POE exhibited lagged predictive effects on learners' long-term achievement in Swedish learning and literacy achievement (Thorsen et al., 2021).

Notably, although Mei et al. (2024) found that L2 grit was positively correlated with hope, they regarded hope as a positive emotion rather than a positive psychological trait. Divergent operational definitions may lead to inconsistent findings. To illustrate, Mei et al. (2024) operationally defined hope as a positive emotion directly related to academic learning, classroom instruction, and individual learning journey. However, the current study conceptualized hope as a psychological trait pertaining to the motivational state composed of agency and pathway. Additionally, Mei et al. (2024) integrated enjoyment and hope as a latent variable named positive emotions, overlooking the heterogeneity between enjoyment and hope. It is thus warranted to isolate hope from other variables in research exploring its link with L2 grit. Additionally, to the best of our knowledge, the present study is the first to explore the relationship between the two by defining them as positive psychological traits. Substantial L2 research has verified correlations between L2 grit and other psychological traits related to English learning. Yang et al. (2022) pointed out that L2 grit was significantly influenced by academic buoyancy, and Azadianbojnordi et al. (2022) held the opinion that a significant direct relationship was verified between academic hope (a psychological trait) and academic buoyancy. These two studies offer empirical evidence for exploring the potential relationship between L2 grit and L2 hope.

MATERIALS AND METHODS

Research Questions

This quantitative research aimed to address the following three questions:

- RQ1: What are the levels of learners' L2 grit and L2 hope?
- RQ2: Is there any statistically significant gender and grade difference in learners' L2 grit and L2 hope?
- RQ3: What is the relationship between learners' L2 grit and L2 hope?

Participants

Chinese individuals are exposed to Confucianism from a young age. Therefore, concepts related to grit and hope are deeply ingrained in their minds and subconsciously influence their beliefs and actions. Most Chinese senior high students are highly focused on their studies in that they

expect satisfactory National College Entrance Examination scores and hope to be admitted into their ideal colleges or universities. Additionally, they are at a critical stage in fostering psychological traits to buffer against some negative learning experiences. Therefore, high school students were selected as research participants. A total of 335 students, comprising 156 males (46.6%) and 179 females (53.4%), from a northeastern city in China were involved in the research. The participants included 124 students in Grade 10, 105 in Grade 11, and 106 in Grade 12.

Instruments

A composite questionnaire was adopted to assess students' L2 grit and L2 hope. All items were translated into Chinese to ensure participants' full comprehension. Participants' L2 grit was assessed by L2 Grit Scale, with nine items developed by Teimouri et al. (2022). The scale has been widely used within Chinese EFL learning contexts (Liu et al., 2025; Liu et al., 2023; Wang & Ren, 2024; Wei et al., 2020). Its reliability and validity have been verified by these studies, which consequently mitigate potential cultural biases and was appropriate for the context of Chinese senior high learners. The scale is composed of two related but distinct components, namely POE and COI. Compared with the two domain-general grit scales (Duckworth et al., 2007; Duckworth & Quinn, 2009), it is more suitable for this research because it is specific to measuring participants' grit in language learning, which responds to the calling for assessing language-domain-specific grit. In this research, items were scored on a 5-point Likert scale from 1 (not like me at all) to 5 (very much like me). It should be noted that items measuring COI (e.g., my interest in learning English changes from year to year) should be reverse-coded before data analyses. In the present research, reliability analysis revealed high or acceptable internal consistency of L2 Grit Scale ($\alpha = .795$) and its two subscales of POE ($\alpha = .850$) and COI ($\alpha = .677$). Notably, although the internal consistency value for the COI subscale is below the widely acceptable threshold ($\alpha \geq .700$), according to DeVellis (2016), an alpha of .60 may be adequate in applied settings. The scale exhibited good construct validity ($\chi^2/df = 2.471 < 3$; CFI = .960 > .90; RMSEA = .066 < .08), meeting the criteria set by Hair et al. (2022).

The Hope Scale developed by Snyder et al. (1991) was employed to assess participants' hope. It contains eight items, including four agency-related items and four pathway-related items. Items were also scored on a 5-point Likert scale with anchors ranging from 1 (definitely false) to 5 (definitely true). The moderate number of items is likely to lower the likelihood of young respondents' cognitive load, making it suitable for participants in the current research. Minor adjustments were made to accurately assess participants' L2 hope. For instance, "I can think many of ways to get out of a jam" was changed into "I can think many of ways to get out of a jam when I learn English." An exploratory factor analysis based on 167 randomly selected data yielded the following results: $\chi^2/df = 2.488 < 3$; CFI = .951 > .90; RMSEA = .095 > .08. Although the value of RMSEA is higher than .08 (a widely-accepted threshold), the construct validity should still be scrutinized by further analysis (Hooper et al., 2007). In this research, the hope scale demonstrated high global reliability alphas ($\alpha = .853$) as well as dimensional reliability ($\alpha = .740$ for agency and $\alpha = .818$ for pathway). A confirmatory factor analysis yielded the following values: $\chi^2/df = 3.211 > 3$; CFI = .967 > .90; RMSEA = .081 > .08. Although the value of χ^2/df and RMSEA did not reach the threshold, the Hope Scale exhibited good

construct validity in that, according to Hooper et al. (2007), strictly adhering to cut-off values might lead to instances of the incorrect rejection of an acceptable model.

Data Analysis

Prior to data collection, this study was approved by the institutional ethics committee of the second author's affiliated university, ensuring that all procedures adhered to ethical research standards. Additionally, student consent forms and parental consent forms were distributed to participants and their parents/guardians/carers. They were informed that the decision to participate in the research would not influence their academic rankings or relationships with senior high school. Their participation was entirely voluntary and they could withdraw from it at any time without providing any reason. Due to restrictions on digital devices, the author printed questionnaires and provided guidance on how to complete them. Notably, the questionnaire did not contain any identifiable personal information (e.g., names and identification codes), which ensured anonymity and data confidentiality and subsequently encouraged participants to report "real" responses. There were 336 return questionnaires. Ultimately, data from 335 questionnaires were input into SPSS 27.0 for analysis. Data screening was conducted initially, primarily for missing value analysis. During the data cleaning procedure, one sample was excluded for missing values. Next, the normal distribution test, the reliability test and confirmatory factor analysis were performed before further data analysis. Finally, descriptive analysis, independent samples *t*-test analysis, one-way analysis of variance (one-way ANOVA), and Pearson correlation analysis were performed respectively to address three research questions.

RESULT

Levels of L2 Grit and L2 Hope

In this research, the classification levels of a 5-point Likert Scale were aligned with the classification proposed by Oxford (1990), where a mean in the range of approximately 3.5-5.0 is considered a high level, 2.5-3.4 a medium level, and 1.0-2.4 a low level. All items measuring senior high students' COI were reverse-coded prior to the data analysis.

The data distribution, with the value of skewness ranging from -2 to +2 and kurtosis ranging from -7 to +7, confirmed the normal distribution (West et al., 1995). Table 1 presents the descriptive results of senior high students' L2 grit and L2 hope. As shown in the table, participants reported moderate levels of global L2 grit ($M = 3.34$, $SD = .67$) and global L2 hope ($M = 3.14$, $SD = .75$).

Specifically, although participants reported moderate levels of POE ($M = 3.21$, $SD = .82$), they had high levels of COI ($M = 3.49$, $SD = .82$). This indicated that despite facing some challenges and failures, participants tended to be empowered by their consistent passion for English learning rather than by investing sustained effort over a long period to achieve their preset goals for English learning. Additionally, participants reported higher levels of pathway ($M = 3.32$, $SD = .84$) than those of agency ($M = 2.97$, $SD = .82$). This meant that compared with investing determination in English learning, they were more inclined to come up with more plans and strategies to achieve their goals when they encountered difficulties in English learning.

Table 1. Profiles of Levels of Students' L2 Grit and L2 Hope

Dimension	Min	Max	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Global L2 grit	1.67	5.00	3.34	.67	-.079 (.133)	-.309 (.266)
POE	1.00	5.00	3.21	.82	-.087 (.133)	-.082 (.266)
COI	1.00	5.00	3.49	.82	-.491 (.133)	-.060 (.266)
Global L2 hope	1.00	5.00	3.14	.75	-.166 (.133)	.512 (.266)
Agency	1.00	5.00	2.97	.82	-.343 (.133)	.234 (.266)
Pathway	1.00	5.00	3.32	.84	-.017 (.133)	.033 (.266)

Note: *M*=Mean; *SD*=Standard Deviation.

Table 2. Gender Differences in L2 Grit and L2 Hope

Dimension	Gender (<i>M</i> ± <i>SD</i>)		<i>t</i> (<i>df</i>)	<i>p</i>	Cohen's <i>d</i> (95% confidential)
	Male (<i>n</i> = 156)	Female (<i>n</i> = 179)			
Global L2 grit	3.26 ± .68	3.40 ± .66	-1.93 (333)	.06	-.21 (-.43, .01)
POE	3.15 ± .87	3.27 ± .76	-1.29 (333)	.20	-.14 (-.36, .07)
COI	3.40 ± .86	3.58 ± .79	-1.92 (333)	.06	-.21 (-.43, .01)
Global L2 hope	3.11 ± .81	3.18 ± .69	-.90 (333)	.37	-.10 (-.31, .12)
Agency	2.93 ± .88	3.00 ± .77	-.80 (333)	.42	-.09 (-.30, .13)
Pathway	3.28 ± .91	3.36 ± .77	-.82 (333)	.41	-.09 (-.30, .13)

Gender and Grade Differences in L2 Grit and L2 Hope

The research also explored gender differences and grade differences in L2 grit and L2 hope levels. Specific data about gender and grade differences could be seen in Table 2 and Table 3 respectively. Independent samples t-test analysis revealed that no statistically significant gender differences could be observed in the six variables. Interestingly, as previously noted, although the means of all participants' levels of COI fell into the category of high levels, males reported moderate levels of COI ($M = 3.40$, $SD = .86$), indicating that females ($M = 3.58$, $SD = .79$) were more consistent with their interest in English learning over a period of time.

In addition, one-way ANOVA was employed to quantitatively compare participants' levels of the six variables to identify potential grade differences. Although statistically significant differences could be observed in global L2 grit among different groups ($p < .05$), participants did not report significant differences in COI ($p = .17 \geq .05$) but in POE ($p = .03 < .05$). Furthermore, due to the different numbers of participants in each group, Bonferroni's post hoc procedure was employed and indicated that there was a significant small-to-medium difference ($\eta^2 = .02 > .01$) in global L2 grit and POE between first-year students and second-year students, which indicated that first-year students were more persistent in achieving their consistent goals set for English learning.

Table 3. Grade Differences in L2 Grit and L2 Hope

Dimension	Grade ($M \pm SD$)			F (2, 332)	P	Post Hoc (Bonferroni)	Eta Squared (η^2)
	First Year ($n = 124$)	Second Year ($n = 106$)	Third Year ($n = 105$)				
Global L2 grit	3.43 $\pm$.68	3.19 $\pm$.68	3.38 $\pm$.64	4.98	.02*	G1 > G2	.02
POE	3.31 $\pm$.84	3.04 $\pm$.82	3.27 $\pm$.76	3.53	.03*	G1 > G2	.02
COI	3.58 $\pm$.76	3.38 $\pm$.89	3.51 $\pm$.81	1.77	.17	--	.01
Global L2 hope	3.18 $\pm$.81	3.00 $\pm$.72	3.25 $\pm$.69	3.43	.03*	G2 < G3	.02
Agency	3.04 $\pm$.84	2.83 $\pm$.81	3.03 $\pm$.80	2.34	.10	--	.01
Pathway	3.32 $\pm$.93	3.16 $\pm$.82	3.48 $\pm$.72	3.77	.02*	G2 > G3	.02

* $p < .05$

One-way ANOVA also revealed statistically significant differences in global L2 hope ($p = .03 < .05$) and its component pathway ($p = .02 < .05$). In contrast, no statistically significant difference in agency ($p = .10 \geq .05$) was found among participants in different grades. Bonferroni's post hoc procedure indicated a small-to-medium significant difference in global L2 hope and pathway between second-year students and third-year students ($\eta^2 = .02 > .01$). This suggested that almost all participants realized the importance of learning English and spared their determination to do so. In contrast, third-year students were more hopeful about English learning and

tended to develop more plans and implement more reasonable strategies.

Interestingly, concerning grade differences in global L2 grit, global L2 hope, and their components, although levels of COI and agency failed to reach the threshold of statistically significant difference, the two variables, together with the other four, showed a similar trend that participants in Grade 2 were less gritty and less hopeful in English learning compared to those in the other two grades, as illustrated by the "u-shape-curve trend" shown in Figure 1.

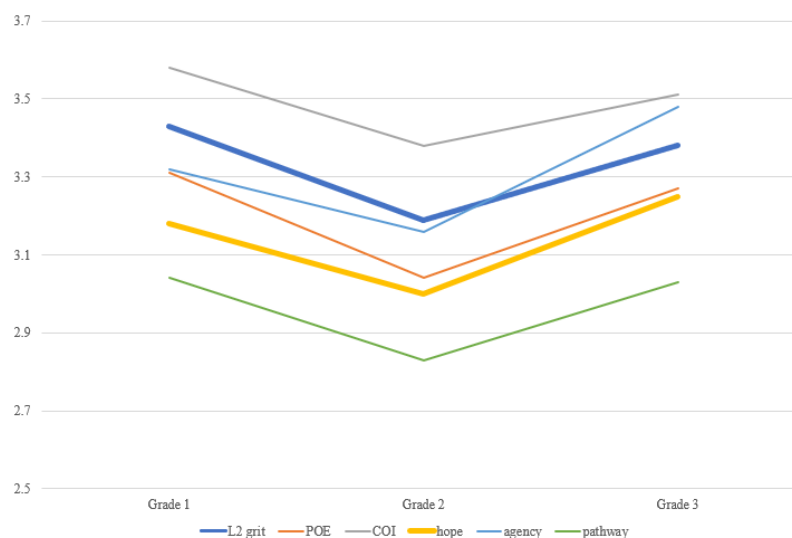


Figure 1. The General Trend of L2 Grit and L2 Hope among Students in Different Grades

Correlations Between L2 Grit and L2 Hope

Pearson correlation analysis was performed to analyze the correlations between L2 grit-related and hope-related variables. Researchers are likely to analyze and interpret effect sizes accurately when referring to the criteria well-suited to a particular discipline or specific domain. Therefore, the interpretation of correlations in this research adhered to the criteria specifically set for L2 research. Plonsky and Oswald (2014, p. 889) suggest that correlation coefficients “close to .25 should be considered small, .40 medium, and .6 large”. As presented in Table 4, L2 grit and its components significantly and positively correlated with L2 hope and its components to varying degrees ($r > 0$, $p < .01$).

Although correlations among L2 grit-related and L2 hope-related variables were established, there were still nuanced differences among those correlations. In particular, compared with global L2 grit and COI, POE, with correlation coefficients ranging between .37 and .46, showed the strongest positive correlation with global L2 hope and its constructs. A similar trend was observed in global L2 grit, but correlation coefficients of global L2 grit ($.35 \leq r \leq .41$, $p < .01$) were slightly lower than those of POE ($.37 \leq r \leq .46$, $p < .01$). Interestingly, all correlation coefficients between COI and hope-related variables, ranging from .17 to .19, failed to reach the threshold of small positive correlations.

Table 4. Correlations Among L2 Grit-Related and Hope-Related Variables

	Global L2 grit	POE	COI
Global L2 hope	.41** (.32, .50)	.46** (.37, .54)	.19** (.09, .29)
Agency	.40** (.30, .48)	.45** (.36, .53)	.17** (.06, .27)
Pathway	.35** (.25, .44)	.37** (.28, .46)	.18** (.07, .28)

** $p < .01$, (95% confidential lower limit, upper limit)

DISCUSSION

RQ1: Levels of L2 Grit and L2 Hope

As for the descriptive results, it was found that participants reported moderate levels of global L2 grit and L2 hope, echoing findings obtained in studies conducted by Lei and Lei (2022) exploring learners' hope and Wei et al. (2019) revealing learners' L2 grit, but inconsistent with the findings regarding levels of L2 grit conducted by Gyamfi and Lai (2020) and Zawodniak et al. (2021). The inconsistencies in L2 grit levels between this study and prior research may stem from differences in participants' English learning objectives. This study chose senior high students as research participants, while Gyamfi and Lai (2020) and Zawodniak et al. (2021) chose English majors as their participants. Specifically, Gyamfi and Lai (2020) found that undergraduates majoring in English in Thailand reported high levels of grit in English learning. Many senior high students, especially those in East Asia, regarded English as a tool, serving as a ladder to help them gain admission into their ideal colleges (Lee, 2022). Some of them even did not spare extra effort to learn English because they perceived that they were not good at learning English, so they had to spend more time on other subjects to make up for the gap and improve their total grades in examinations if possible. However, English majors had to work hard to learn English because they majored in English and needed to meet graduation requirements. In addition, they were eager to have an advantage in GPA or academic achievement over others when they sought employment or continued with their education (Lee, 2022).

In addition, participants' perceptions of L2 grit constructs showed that COI was rated higher than POE, which was not in line with the conclusion drawn from most Asian L2 learners (Gyamfi & Lai, 2020; Khajavy, 2021). Traditional Chinese culture emphasizes both perseverance and interest. However, stereotypes of Chinese individuals (e.g., tenacity) may lead to interpretations of traditional culture as overly perseverance-oriented, overlooking interest-related dimensions. In addition to the cultural influence, interest-oriented teaching reforms and education

has been being highlighted recently in China, especially in K-12 education (MOE, 2020). Therefore, it makes sense that participants in this research reported higher levels of COI than those of POE. It was not surprising that participants rated higher levels of pathway than those of agency. One possible explanation for this is that as L2 learners, it is customary to face tedious practices and lack an immersive English communication environment (Ebadi et al., 2018). However, they have to stick to learning English because it is increasingly important in all walks of life, and they need to get higher scores in English examinations to avoid falling behind others. In view of this, although sometimes they are reluctant to learn English, they have to resort to different strategies to (re)spark their agency in it.

Furthermore, as mentioned in the theoretical framework, agency, one of the components of L2 hope being similar to COI, was driven by cognition or awareness, and pathway, the other component of L2 hope being similar to POE, was pushed more by people's actions in practice. Given this the, it was consequently predicted that if a participant had higher/medium/lower levels of COI/POE, he/she would report higher/medium/lower levels of agency/pathway correspondingly. However, in this research, although levels of participants' COI were higher than those of POE, levels of agency were lower than those of pathway, which did not meet the presupposition before the data analysis. This might indicate that participants from different grades could be interested in learning English for an extended period. Two possible reasons could explain their long-lasting interest in English learning. First, from the perspective of ecological theory, perceived classroom affordance pinpoints the importance of learners' perceptions and assessments of the environment and components (like textbooks and teaching materials) of a classroom (Norman, 1999). Participants from different grades would be exposed to different English textbooks, which may trigger their perceived classroom affordance and, if possible, maintain their interest in English learning at the beginning of each semester or school year, for they see the moment as a new chapter. Second, most participants would set different English learning goals when they are in different grades or stages. It should be noted that these

different English learning goals are not contradictory to COI because they are all oriented towards learning English well. Upon setting those goals in different stages, they tend to be confident in achieving them, and this kind of belief might push them to be interested in English learning again. However, sometimes they might lack lasting or long-term determination or think negatively about English learning when facing challenging situations, such as experiencing demotivation in English learning and anxiety in English classrooms (Liu et al., 2023). Therefore, some of them sometimes regard English as a headache and then “give up” learning it. Although they facing the aforementioned difficulties, English, as a compulsory subject in Chinese senior high school, is almost unavoidable during their academic learning, so they must come up with possible ways or use some learning strategies to force them to be “persistent” and sail them through.

RQ2: Gender and Grade Differences in L2 Grit and L2 Hope

Speaking of differences of L2 grit and L2 hope in gender and grades, although no statistically significant gender difference in L2 grit and L2 hope emerged in this research, females were grittier and more hopeful than males in English learning. This research voiced different opinions from previous research on gender differences in L2 hope, which posited that males perceived higher levels of L2 hope than females (Ganji et al., 2021; Ghahremani et al., 2020; Zeng et al., 2022). Cultural context may explain these discrepancies. Ghahremani et al. (2020) and Ganji et al. (2021) reported that males perceived more hope than females in the Iranian cultural context, while this research was conducted in China. There are many differences in cultural contexts between the two countries. Differences in participant demographics also warrant consideration. Zeng et al. (2022) conducted their research in China and found that males were more hopeful in English learning than females. However, Zeng et al. (2022) chose students in vocational high schools as participants whose training targets were different from those of participants in this research.

In addition to gender differences, participants in different grades showed significant differences in L2 grit and L2 hope. Specifically, statistically significant differences were observed in POE and pathway, which were expected before the data analysis. This phenomenon is similar to the “exercise-induced critical point” experienced by athletes in races. On entering senior high school, almost every freshman looks forward to their future school life, and they begin to set goals for English learning. However, learning English or any other subject in senior high school is like climbing a mountain. Some learners may shift their interest from English to other subjects or encounter challenging situations mentioned above on their way to achieving their goals. Some of them experience the “exercise-induced critical point” in studying after a period of time, especially when they are in the second year. Most of them will re-energize themselves later to meet graduation requirements and get satisfactory grades in their critical national college entrance examination.

RQ3: Correlations Between L2 Grit and L2 Hope

In relation to RQ3, it was found that global L2 grit correlated moderately and positively with L2 hope ($r = .41$, $p < .01$). This revealed that grittier L2 learners tended to report higher levels of L2 hope, indicating that grittier participants were likely to have a more robust determination and set up more reasonable plans to achieve

their goals for English learning efficiently. Although scant attention has been paid to exploring correlations between L2 grit and L2 hope, many researchers focus on correlations between L2 grit and other positive psychological constructs (e.g. FLE), and some of them have claimed that L2 grit was positively related to FLE or L2 joy (Teimouri et al., 2022; Wei et al., 2019; Wei et al., 2020). Analyzing data drawn from 832 middle school students in China, Wei et al. (2019) claimed that a positive correlation between L2 grit and FLE was verified, which was consistent with the findings of this research to some extent in that L2 hope is also one of the positive psychological constructs in L2 research. Additionally, research findings on the correlations between participants’ global L2 grit and L2 hope, to some degree, were in line with those that pinpoint a positive correlation between L2 grit and FLE emerging when learners studied languages in crisis mode such as the pandemic (Resnik et al., 2021). As mentioned in the literature review, hope has been regarded as an essential positive psychological trait when people meet emergencies or other crises. This might shed light on this research, where L2 grit positively correlated with L2 hope, although previous studies seldom explored the relationship between the above two variables. Specifically speaking, global L2 grit had a positive medium correlation with agency ($r = .40$, $p < .01$) and a positive small-to-medium one with pathway ($r = .35$, $p < .01$). This indicated that compared with planning more reasonable ways to achieve their goals as scheduled, grittier participants tended to have firm faith that they could achieve their goals. Thus, global L2 grit provided greater motivational sustenance than actionable strategies.

Regarding effect sizes of two components of L2 grit, POE showed significant small-to-medium correlations with L2 hope and its components, while COI only showed negligible ones. According to research findings, COI was not correlated with L2 hope-related variables, which seemingly did not align with those that indicate academic hope was directly related to academic enthusiasm (Izadpanah & Rezaei, 2022). Additionally, it was described that POE, in this research, played a more important part in learners’ hope-related experiences than COI did; that is, higher levels of POE tended to make them feel more hopeful in English learning, set short-term and long-term consistent goals, smile to setbacks, frustrations, and other struggles they might meet when they move forward their goals, and then come up with reasonable multiple plans and solutions to help them succeed. One possible reason for the non-negligible differences in the effect size of POE and COI on L2 hope-related variables is the Confucian culture. Confucianism is the foundation of Chinese culture, and nearly every Chinese has been being influenced by it since his/her birth (Cortazzi & Jin, 1997; Jin & Cortazzi, 2006). Confucianism accentuates more individuals’ perseverance than personal interests. Some expressions, such as “a long journey cannot be covered only by taking one step at a time, and a sea cannot be itself without tributaries”, exemplify the importance of perseverance in achieving their goals. The cited expression is an epitome of exhortations that Confucianism conveys in terms of encouraging people to achieve their goals, namely being persistent. Additionally, the collectivist cultural atmosphere has been exerting an influence on most Chinese (Jin & Cortazzi, 2006). An individual’s interest should sometimes be consistent with collective or national goals; therefore, the value of an individual’s interest is not as important as other factors.

CONCLUSION, IMPLICATIONS AND LIMITATIONS

Conclusion

As pointed out in the introduction, L2 grit and L2 hope are necessary traits for language learning, especially when learners face crises. Therefore, the two traits merit careful investigation. The current research confirmed early findings that participants reported moderate levels of L2 grit and L2 hope. In addition, statistically significant differences in L2 grit and L2 hope, POE and pathway in particular, could be seen among participants in different grades. Although gender differences were negligible, females rated L2 grit and hope higher than males. Furthermore, the current research also claimed that L2 grit and its component POE positively correlated (small-to-medium) with L2 hope and its components respectively, which was a preliminary finding in the Chinese EFL context. The findings that differences in the effect size of POE and COI also were in line with previous findings, to some degree, showing that POE and COI had different predictability for academic variables and that compared with COI, POE was a stronger predictor (Datu et al., 2016).

Implications

The findings have some pedagogical implications. First, senior high students in Grade 2 tended to report lower levels of L2 grit and L2 hope. Additionally, the “exercise-induced critical point” phenomenon commonly experienced in races was introduced into this research to explain the difference, so teachers should normalize this phenomenon and adopt strategies to bolster students’ L2 grit and L2 hope rather than attributing blame. Correspondingly, English teachers can create an English classroom environment where students can gain confidence and perseverance. For instance, when students succeed in finishing a task, their teachers should praise them for their effort during the process instead of stressing the importance of their talents. Moreover, teachers should not blame students who suddenly see their scores drop during this period because unreasonable blame may dampen their consistent interest in English learning and force them to “lie flat” when exposed to English-related tasks. Instead, they can talk with those students and figure out the reason for the sudden drop.

This study also offers implications for L2 researchers. First, this research initially confirmed that learners’ L2 grit correlates with L2 hope in the Chinese EFL context initially. Therefore, more samples are needed in further studies to confirm the reliability of the correlations in the same and other cultural contexts. Second, this synchronic research found a “u-shape-curve trend” in L2 grit and L2 hope levels among participants in different grades. To take a closer look at the reversed uniform rise and fall trend, researchers can take into consideration single-cohort longitudinal design, that is, selecting a group of freshmen in senior high to follow at certain times every year for 3 years. Third, researchers can employ qualitative methods, such as semi-structured interviews and learners’ diaries to uncover hidden reasons for differences.

Limitations

This research is certainly not free from limitations. First, the absence of longitudinal data necessitates caution in interpreting the observed “u-shape-curve trend” in developmental trajectories of variables under investigation

across different grades. Second, self-report bias, such as participants inflating scores to meet perceived expectations, may limit accuracy. For instance, social desirability may lead participants to inflate scores on socially valued traits like L2 grit and L2 hope, while memory recall inaccuracies may affect retrospective assessments of language learning behavior. Thus, self-report bias may disproportionately influence constructs requiring subjective evaluations although participants were told that they needed to complete the questionnaire according to actual behaviors and thoughts. To mitigate the bias, data triangulation (e.g., teacher-reported data and learners’ daily reflective journals) can be included to improve data trustworthiness and credibility.

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Conflicts of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethics approval

All methods followed the guidelines and regulations of the 1964 Helsinki Declaration and its later amendments. Since this study does not involve intervention and is low-risk, ethical review and approval were waived according to the institutional review boards at the School of Foreign Languages at Soochow University.

Consent to participate

All participants were required to sign a written informed consent form. They were also informed about the purpose of the study and their right to withdraw from it at any time. All methods were carried out under relevant guidelines and regulations.

Consent for publication

The authors confirm that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis), that it is not under consideration for publication elsewhere and that its publication has been approved by all co-authors.

Availability of data and material

Data available on request due to restrictions (e.g., privacy, legal or ethical reasons).

Code availability

Not applicable.

Author contribution

Conceptualization: Gongwei Guo and Honggang Liu; Methodology, Gongwei Guo and Honggang Liu; Formal analysis, Gongwei Guo; Investigation, Gongwei Guo; Writing original draft, Gongwei Guo and Honggang Liu; Writing review & editing, Gongwei Guo, and Honggang Liu. All authors have read and agreed to the published version of the manuscript.

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